1-20. (CANCELED)

21. (CURRENTLY AMENDED) The method according to claim [[17]] 36, ~~wherein~~ further comprising the step of carrying out the de-convolution process ~~is carried out~~ using least-squares running filtering.

22. (CANCELED)

23. (CURRENTLY AMENDED) The method according to claim [[22]] 38, ~~wherein~~ further comprising the step of determining the area of the object-image within the edge-contour ~~is determined~~.

24. (CURRENTLY AMENDED) The method according to claim [[22]] 38, ~~wherein~~ further comprising the step of determining the volume of the object-image within the edge-contour ~~is determined~~.

25. (CURRENTLY AMENDED) The method according to claim [[22]] 38, ~~wherein~~ further comprising the step of scanning the ~~object-scan~~ scanned object [[is]] via a magnetic resonance (MR) scan, values of relaxation times T_1 and T_2 are derived for the ~~object-image~~ image of the object within said contour, and these values are used to identify from stored data, types of material involved in the scanned object.

26. (CURRENTLY AMENDED) The method according to claim 25, ~~wherein~~ further comprising the step of deriving density values for the identified types of material ~~types are derived~~ from further stored data.

27. (CURRENTLY AMENDED) The method according to claim [[17]] 36, ~~wherein~~ further comprising the step of deriving corresponding computed tomography (CT) and magnetic resonance (MR) scans of the same part of an object ~~are derived~~, the scans are related to one another for correlation of one to the other positionally with respect to said part using the de-convolution process, and imaging of said part of the object is provided in accordance with the MR-scan image as modified spatially in dependence upon the CT contrast numbers applicable to the corresponding, correlated positions of the CT scan.

28. (CURRENTLY AMENDED) The method according to claim 27, ~~wherein~~ further comprising the step of applying geometric correction ~~is applied~~ to the imaging ~~derived from the MR scan~~ of said part[[,]] in accordance with stored data.

29-32. (CANCELED)

33. (CURRENTLY AMENDED) The imaging system according to claim [[29]] 41, wherein the means for carrying out the de-convolution process is ~~carried out using~~ a least-squares running ~~filtering~~ filter.

34. (NEW) A method of imaging in which a de-convolution process is applied to image-domain results of an object-scan to derive therefrom a respective point-spread function or a line-spread function of at least one object-discontinuity, and to derive from said function a location in the image domain of the respective discontinuity;

the method comprising the step of:

carrying out the de-convolution process out using sub-pixel sampling; and

correlating the function with the image-domain results of the object-scan for enhancement of spatial resolution of the imaging of the respective discontinuity, and the enhancement of spatial resolution of the imaging of the respective discontinuity involves transfer of sub-pixels within the image-domain results of the respective discontinuity, the sub-pixels being transferred within their respective image-domain results from one side to the other of the location for edge-image definition.

35. (NEW) An imaging system comprising means for performing a de-convolution process on image-domain results of an object-scan to derive therefrom a respective point-spread function or a line-spread function of at least one object-discontinuity, and a mechanism to derive from the function a location in the image domain of the respective discontinuity;

wherein the de-convolution process is carried out using sub-pixel sampling; and

the function is correlated with the image-domain results of the object-scan for enhancement of spatial resolution of the imaging of the respective discontinuity, the enhancement of spatial resolution of the imaging of the respective discontinuity involves transfer of sub-pixels within the image-domain results of the respective discontinuity, the sub-pixels being transferred within their respective image-domain results from one side to the other of the location for edge-image definition.

36. (NEW) An imaging method for enhancing spatial resolution within an image domain of an image edge-response function of a scanned object-discontinuity, the method comprising the steps of:

carrying out a de-convolution process on the image edge-response function to derive from the image edge-response function a spread profile of the

respective point-spread function or line-spread function of the image edge-response function, the de-convolution process being carried out with sub-pixel sampling of the image-edge response function;

correlating the spread profile with a profile of the image edge-response function;

identifying within the image domain the location of the object-discontinuity, the location of the object-discontinuity being identified within the image domain by a mid-point of a full-width half-maximum of the spread profile; and

redistributing sub-pixels of the profile of the edge-response function to enhance the spatial resolution of the object-discontinuity within the image domain, the sub-pixels being redistributed between two opposite sides of the identified location of the object-discontinuity in the image domain, by transferring sub-pixels on one of the two sides to the other of the two side of the identified location.

37. (NEW) The method according to claim 36, further comprising the step of using low-contrast filtering to remove spurious edges of the image of the object-discontinuity in the image domain.

38. (NEW) The method according to claim 36, wherein the object-discontinuity is one of a multiplicity of object-discontinuities of a scanned object, and the method further comprises the step of enhancing the spatial resolution in the image domain of the image edge-response function of each of the object-discontinuities to define an edge-contour of the object within the image domain.

39. (NEW) The method according to claim 38, further comprising the step of determining the intensity within the edge-contour of the object within the image domain.

40. (NEW) The method according to claim 34, further comprises the steps of enhancing the spatial resolution of the image-edge response functions that result respectively from a magnetic resonance (MR) scan and a computed tomography (CT) scan of the object-discontinuity, correlating the enhanced image-edge response functions of the MR and CT scans with one another, deriving from the enhanced image-edge response function of the CT scan, CT contrast numbers for respective parts of the object-discontinuity, and providing modified imaging of the parts of the object-discontinuity, the modified imaging being provided from the respective parts of the MR scan modified by the CT contrast numbers for those respective parts.

41. (NEW) An imaging system for enhancing spatial resolution within an image domain of an image edge-response function of a scanned object-discontinuity, the system comprising:

means for carrying out a de-convolution process on the image edge-response function to derive from the image edge-response function a spread profile of the respective point-spread function or a line-spread function of the image edge-response function, the de-convolution process being carried out with sub-pixel sampling of the image-edge response function;

means for correlating the spread profile with a profile of the image edge-response function;

means for identifying within the image domain the location of the object-discontinuity, the location of the object-discontinuity being identified within the image domain by a mid-point of a full-width half-maximum of the spread profile; and

means for redistributing sub-pixels of the profile of the edge-response function to enhance the spatial resolution of the object-discontinuity within the image domain, the sub-pixels being redistributed between two opposite sides of the identified location of the object-discontinuity in the image domain, by transferring sub-pixels on one of the two sides to the other of the two side of the identified location.